CLAIMS:

1. A process for the utilization of a fuel having an initial boiling temperature or prevailing initial boiling temperature range at 1 bar of between 231 K and 830 K, characterized in that:

   (a) the fuel is contacted with at least one oxidant preheated to from 520 K to 880 K at a pressure, p, of ≥ 1 bar, or at a lower pressure with a reduction of the temperature range, and a C/O molar ratio of between 1:0.14 and 1:25 in a reaction space to initiate exothermic prereactions in the form of a cool flame which cause only partial conversion of the fuel and oxidant even when the fuel and oxidant are homogeneously mixed; and

   (b) a kinetic reaction inhibition of the further reaction of the oxidizable mixture formed in the cool flame is provided by adjusting a technically relevant dwelling time t_v of the mixture prepared in step (a) in the reaction space of $t_v > 25$ ms at $p \leq 1$ bar, and dwelling times which become shorter when the pressure is increased under otherwise equal conditions, and a limited heat dissipation from the reaction zone through an inert gas stream with a ratio of the heat capacity flow of the oxidant, $\dot{M} \cdot c_p$, to the product of fuel mass flow, $\dot{M}_b$, and heating value, H_u, which is, in the adiabatic reaction space, $\dot{M} \cdot c_p / \dot{M}_b \cdot H_u > 2 \cdot 10^{-4}\ K^{-1}$, and/or through the reactor wall with a heat flow density, $\dot{q}$, of $\dot{q} < 85\ kW/m^2$, whereby auto-ignition of the mixture is prevented, especially for a predictable period of time.

2. The process according to claim 1, wherein hydrocarbons, mixtures of hydrocarbons with non-hydrocarbons in the form of emulsions and/or suspensions with liquids substantially insoluble in hydrocarbon, especially water in admixture with ammonia, hydrogen sulfide and/or alkanols, are essentially used as said fuels.

3. The process according to claim 2, wherein said oxidant is oxygen, ozone, air, exhaust gases from superstoichiometric combustion, an oxygen-containing compound, such as a compound containing peroxides, sulfur oxides, nitrogen oxides (N_yO or NO_x).

4. The process according to claim 1 ~~at least one of claims 1 to 3,~~ wherein at least partial vaporization and/or atomization of the fuel is achieved.

5. The process according to claim 1 ~~at least one of claims 1 to 4~~, wherein the mixture from step (b) ~~of claim 1~~ is at least partially recirculated into a system of step (a) ~~of claim 1~~.

6. The process according to claim 1 ~~at least one of claims 1 to 5~~, wherein the starting temperature of the exothermic prereactions is lowered by a pressure reduction of the mixture of oxidant and fuel, by recirculation of at least part of the mixture of step (b) ~~of claim 1~~, and/or by the addition of a catalyst.

7. The process according to claim 6, wherein the energy necessary for initiating the reactions of step (a) ~~of claim 1~~ is obtained from the exothermic prereaction according to step (a) ~~of claim 1~~ and/or by introducing energy from a downstream process.

8. The process according to claim 1 ~~at least one of claims 1 to 7~~, wherein the mixture of step (b) ~~of claim 1~~ will condense at a lower temperature range than that corresponding to the initial boiling temperature range of the fuel.

9. The process according to claim 1 ~~at least one of claims 1 to 8~~ for the processing and/or refining of fuels, especially in refining plants, in synthesis gas production, protective gas production, for the provision of gaseous fuels for fuel cells, for combustion in combustion engines and/or firing plants, for the separation of product streams from accompanying substances.

10. The process according to at least one of claims 1 to 9 for driving mobile devices, such as vehicles.

11. The process according to claim 1 ~~at least one of claims 1 to 9~~ for use in immobile devices, such as devices for the generation of mechanical or electric power and/or heat.

12. The process according to claim 9, wherein air and/or oxygen is preferably used as the oxidant, and the educts from step (a) ~~of claim 1~~ are supplied substoichiometrically, preferably at an air ratio of λ = 0.2 to 0.7.

13. The process according to claim 2 ~~at least one of claims 1 to 12~~, wherein an additional product stream essentially consisting of said fuels ~~as defined in claim 2~~ or non-hydrocarbons, especially materials containing hydrogen, is supplied to step (b) ~~of claim 1~~.

14. The process according to claim 9, wherein the product obtained from step (b) ~~of claim 1~~ is converted to a fuel gas suitable for fuel cells, such as hydrogen, carbon monoxide and/or short-chained hydrocarbons, by technically known process steps, preferably partial oxidation, steam reforming and/or shift conversion (water-gas reaction).

15. The process according to claim 9 ~~claims 9 and/or 14~~, wherein said fuel cell is a membrane fuel cell (PEMFC).

16. The process according to claim 1 ~~at least one of claims 1 to 15~~, wherein the mixture from step (b) ~~of claim 1~~ is subjected, at least partially, to an increase in pressure.

17. The process according to claim 1 ~~at least one of claims 1 to 16~~, wherein the mixture from step (b) ~~of claim 1~~ is subjected, at least partially, to a separation process, preferably a thermal separation process.

18. A product obtainable by the process according to ~~at least one of claims 1 to 17~~.

19. Use of the product according to claim 9 in a process according to claim 18.

20. A device for producing a mixture of step (b) of claim 1, characterized in that the fuel is contacted by means of a fuel supply with the oxidant which is supplied, for example, through an oxidant nozzle to form a cool flame in a reaction tube, which can in part change their state and/or process parameters according to steps (a) and (b) of claim 1 by the recirculation of, preferably, cool flame products supplied to the reaction zone by internal and/or external recirculation.